

BROOKHAVEN NATIONAL LABORATORY NATIONAL SYNCHROTRON LIGHT SOURCE		Number: LS-SDL-0013	Revision: B
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Subject: Response to SDL Linac Modulator Malfunction			
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*Document must contain approved signatures for validity

Response to SDL Linac Modulator Malfunction

1. A trained SDL Operator must be in attendance at all times that high voltage is on to any linac modulator at the SDL.
2. In the event of arcing or other evidence of malfunction in a modulator such as loud bangs, rapid staccato PFN firings, or burning smell) , all power to the modulators must be immediately removed by operating the “Linac Emergency Stop” button on the linac equipment console , or a “Modulator Emergency Stop” button located on each modulator cabinet.
3. If modulator operation is stopped due to evidence of malfunction, a Modulator technician must be called in to inspect and test the unit before high voltage is re-applied. The result of the inspection and test must be noted in the Control Room Log before the modulator is returned to service.
4. If a modulator has been turned off due to evidence of malfunction, a person must remain at the modulators for at least ten minutes to verify that there is no smoldering fire or similar problem.
5. The modulator PFN cabinets may be opened only by qualified persons trained in the hazards therein (such as LoTo and fire extinguisher qualifications). Each capacitor in the cabinet can carry potentially lethal stored energy, and an arc or fire could disconnect the automatic grounding equipment and prevent it from functioning. If any capacitor casing is cracked, bulging or discolored the capacitor must be replaced prior to further operation.
6. If there is evidence of a fire in the modulator (smoke or light), the following actions should be taken:
 - a. Press a Modulator Emergency Stop if not already done
 - b. Make a call to the BNL Fire Department (911 or x2222) even if fire alarms have already sounded and notified them.
 - c. Make an announcement by dial 646 to inform other building occupants.

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7. If there is any fire, use extreme caution. A small flame may be extinguished by qualified persons using a Halon extinguisher, but only if the person is comfortable doing so and this does not place them unnecessarily at risk. If fire or smoke appear to be dangerous or not under control, evacuate the building and notify the NSLS Control Room at ext 2550. Meet BNL Emergency Response when they arrive and provide information and assistance.

NOTE: The BNL Fire Department must be called regardless of how small the fire is.

[Revision/Review Log](#)